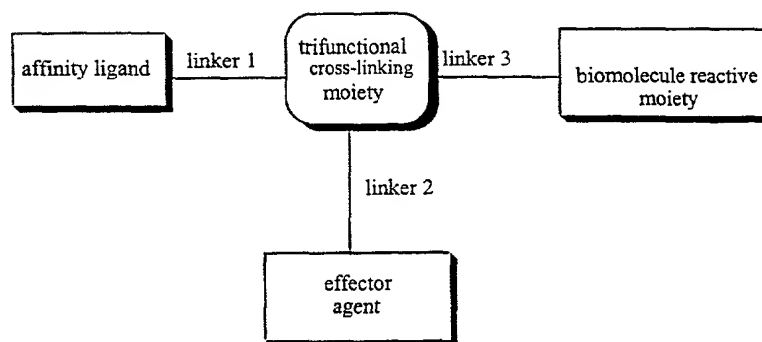


CLAIMS

1. Reagent for conjugation to a biomolecule, wherein
5 the reagent is a single molecule with at least three
functional parts and has the following schematic
structure (I):



10

a) wherein a trifunctional cross-linking moiety is coupled to

b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another
15 molecule having affinity for said ligand, to

c) an effector agent, optionally via a linker 2, said effector agent exerting its effect on cells, tissues and/or humorous molecules in vivo or ex vivo, and to

20 d) a biomolecule reactive moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomolecule.

2. Reagent according to claim 1, wherein the trifunctional cross-linking moiety is chosen from the group
25 consisting of triaminobenzene, tricarboxybenzene, dicarboxyaniline and diaminobenzoic acid.

4. Reagent according to claims 1-3, wherein the affinity ligand is a moiety which binds specifically to avidin, streptavidin or any other derivatives, mutants or fragments of avidin or streptavidin having essentially the same binding function to the affinity ligand.

6. Reagent according to claims 1-5, wherein the biotin derivative is chosen from the group consisting of norbiotin, homobiotin, oxybiotin, iminobiotin, desthiobiotin, diaminobiotin, biotin sulfoxide, and biotin sulfone, or other molecules thereof that having essentially the same binding function.

8. Reagent according to claims 1-6, wherein linker 1 serves as an attaching moiety and a spacer between the trifunctional cross-linking moiety and the biotin moiety such that binding with avidin or streptavidin, or any other biotin binding species, is not diminished by steric hindrance.

30 9. Reagent according to claims 1-8, wherein linker 1
contains hydrogen bonding atoms such as ethers or thio-
ethers, or ionizable groups such as carboxylates, sulfon-

[illegible][illegible][illegible][illegible]

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[illegible][illegible]

reacting with aldehyde or ketone groups naturally occurring or synthetically produced on the biomolecule.

21. Reagent according to claims 1-20, wherein linker 3 is excluded.

5 22. Reagent according to claims 1-20, wherein linker 3 provides a spacer of a length of 1-25 atoms, preferably a length of 6-18 atoms, or groups of atoms.

23. Reagent according to claims 1-20 and 22, wherein linker 3 contains hydrogen bonding atoms such as ethers
10 or thioethers, or ionizable groups, preferably as carboxylates, sulfonates, or ammonium groups to aid in water solubilization.

24. Reagent according to any of the previous claims, wherein it is chosen from the group consisting of the
15 following compounds:

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conjugated to the biomolecule prior to attachment of the radionuclide, and the said radioactive conjugated biomolecule is added to the blood circulation of a mammal and kept therein for a certain period of time in order to be concentrated to the target tissue or cells on which it is to be detected and/or exert its therapeutic action, wherein the biomolecules that are not being attached to the target tissue are completely or partially removed from the blood circulation by administration of a protein specifically binding to the affinity ligand or by passing the mammalian blood or plasma through an affinity column specifically adsorbing the conjugated biomolecule by specific interaction with the affinity ligand.

30. Kit for extracorporeally eliminating or at least reducing the concentration of a non-tissue-bound therapeutic or diagnostic biomolecule conjugate, which has been introduced to a mammalian host and kept therein for a certain time in order to be concentrated to the specific tissues or cells by being attached thereto, in the plasma or whole blood of the vertebrate host, said kit comprising a therapeutic or diagnostic biomolecule, a reagent according to any of claims 1-26 for simultaneous conjugation of an affinity ligand and an effector agent to a biomolecule, means for extracorporeal circulation of whole blood or plasma from the vertebrate host, an optional plasma separation device for separation of plasma from blood, an extracorporeal adsorption device, and a means for return of whole blood or plasma without or with low concentration of non-tissue-bound target specific therapeutic or diagnostic agent to the mammalian host, wherein the adsorption device comprises immobilized receptors specific towards an affinity ligand.

32. A kit according to claims 30 and 31, wherein the affinity ligand is biotin, or a biotin derivative having essentially the same binding function to avidin or streptavidin as biotin, and the immobilized receptor is avidin or streptavidin, or any other derivatives, mutants or fragments of streptavidin having essentially the same binding function to biotin.

32. A kit according to claims 30 and 31, wherein the affinity ligand is biotin, or a biotin derivative having essentially the same binding function to avidin or streptavidin as biotin, and the immobilized receptor is avidin or streptavidin, or any other derivatives, mutants or fragments of streptavidin having essentially the same binding function to biotin.